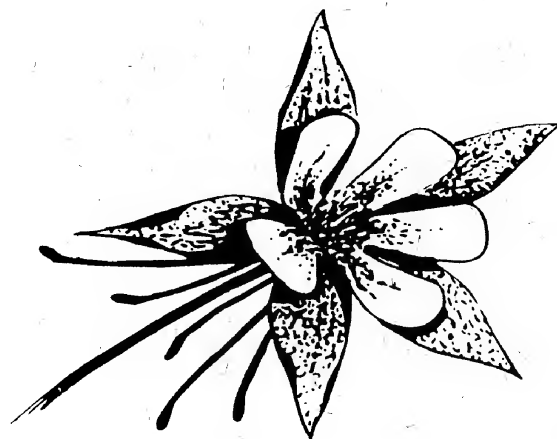


Aquilegia



Newsletter of the Colorado Native Plant Society

"... dedicated to the appreciation and conservation of the Colorado native flora"

Volume 25 Number 1-2

January—February 2001

The Year in Review CoNPS Board of Directors

Reaffirming its dedication to the "appreciation and conservation of the Colorado native flora," the Colorado Native Plant Society continued to increase its profile in the state. From the extremely successful Annual Meeting through the well-attended workshops and field trips to the numerous Chapter activities, the Society provided a diversity of activities for members, coupled with an increasing advocacy for Colorado native plant species. While workshops and field trips are among our most popular and well-attended activities, few events better reflect the cooperative efforts of our volunteers than the Annual Meeting, which may involve more than a year of planning. This year was no exception.

Annual Meeting 2000

Mesa State College in Grand Junction was the site for this year's Annual Meeting hosted by the Plateau Chapter. The program was entitled "Natural History and Plant Ecology of the Colorado Plateau." Life-long CoNPS memberships were awarded to Rick Brune, Loraine and Dick Yeatts; while Denise Culver was recognized for her considerable service as Treasurer. A plaque memorializing Myrna P. Steinkamp, who passed away in 2000, was given to Sue Martin, her Co-chair on the Membership Committee. Rick Brune somehow managed the book sale without Velma Richards, the sound system worked, and it even rained at times other than lunch and breaks! And what great speakers and presentations there were!

Dr. Bruce Bauerle (Mesa State) initiated the meeting with ideas on "how to set the hook" and interest others in plants. Noting that plant extinctions are increasing, he called upon us, as CoNPS members, to remain "stalwart keepers of native plants in Colorado." Loraine Yeatts next put on an INCREDIBLE slide show covering the plants and plant communities of the Colorado Plateau. Members saw some of the Colorado Plateau endemics and learned of their adaptations to the dry, desert conditions. There was definitely magic in this slide show, which was even accompanied by music! We were very lucky this year to have Dr. James Reveal (Professor Emeritus, University of Maryland) talk to us about the genus *Eriogonum* (buckwheat) and the rapid evolution of this genus within the Polygonaceae on the Colorado

Plateau. Our next presentation was by Dr. Don Sullivan (University of Denver), who has been conducting research on long term climatic changes in Colorado. By examining sediment core samples obtained from Colorado fens, Dr. Sullivan has determined that the Mesa Lake fen is 23,000 years old and, as such, the oldest fen discovered so far in the state! He also reported that Grand Mesa was deglaciated 5,000 years earlier than any other area in Colorado. Dr. Susan Meyer (USDA Forest Service Shrub Science Laboratory) next discussed the distribution, adaptations, and pollination and seed dispersal strategies of the unusual Blackbrush (*Coleogyne ramosissima*, Rosaceae). The relationship between native plants on the Colorado Plateau with cryptobiotic soil crusts was discussed by Dr. Jayne Belnap (United State Geological Survey). Dr. Belnap informed us that soil crusts occupy up to 70% of the interspaces between native plants on the Plateau. These crusts, which are comprised of cyanobacteria, lichens, and mosses, are the "glue holding the Colorado Plateau in place." With regard to the vegetation of the plateau, soil crusts play two major roles — fixing nitrogen and stabilizing soils for the establishment of native plants. Non-natives, specifically cheatgrass, are seldom seen in areas with good soil crust establishment. Furthermore, recovery of soil crusts after disturbance can take up to 100 years — recovery increasing with intensity of disturbance. Our final speaker was Joel Tuhy (The Nature Conservancy), who illustrated some of the rare plants of the Colorado Plateau, includ-

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ing the Cisco milkvetch (*Astragalus sabulosus*, Fabaceae), canyonlands biscuitroot (*Aletes latilobus*, Apiaceae), and the alcove rock daisy (*Perityle specuicola*, Asteraceae). The threats to these species were also discussed.

Rick Brune and Velma Richards (**Sales Committee**) report that books, t-shirts, and other merchandise were again popular with attendees at the Annual Meeting. Sales exceeded \$4700, nearly matching the sales of the 1999 annual meeting. Although book sales dropped by about 30%, the sales of shirts and totebags made up the difference. The drop in book sales may be due to the lack of new members, something that is inevitable without new membership. In response, the Committee has dropped about 25 old titles from their list and added about 25 new ones, which may help sales. Interestingly, there were no clear cut favorite titles or best sellers, as in previous years.

Sunday went just as well, with three successful field trips. Not even snow stopped a determined group from accompanying Dr. Sullivan to fens on the Grand Mesa. Peggy Lyon led a group to the Colorado National Monument, where they saw the unusual canyonlands biscuitroot in sandstone seeps. The group was also treated to two four o'clocks, *Mirabilis glandulosa* and *M. multiflora* (Nyctaginaceae), both in full bloom! The third group enjoyed a tour of Chelsea Native Plant Nursery near Clifton. The owner, Stacey Stecher, and her husband collect seed from many native species in the area, resorting to other regional sources, as necessary.

All in all, it was a great weekend! Many thanks go to Jeanne Wenger, Bob Clarke, and other Western Slope members!

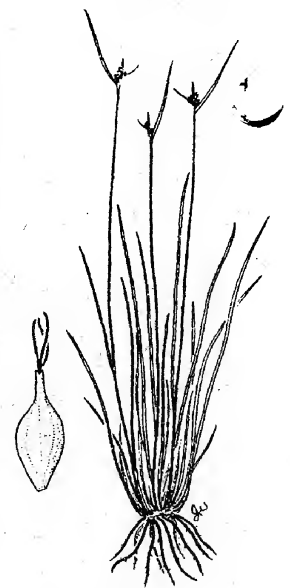
News from Chapters

Chapter activities continue to be a source of inspiration for the Board of Directors. The following select reports illustrate the events that were available to all members of the Society in 2000. The **Boulder Chapter** started the year with Department of Wildlife's Dave Weber motivating us to go forth and eliminate Purple Loosestrife (*Lythrum salicaria*, Lythraceae). In February, Loraine Yeatts gave an inspiring show of beautiful photographs and lovely music to a very large crowd. Stands of cottonwoods will never be viewed the same after Jonathan Friedman demonstrated in March that this species can indicate past flooding. In April, Carol Dawson shared her dissertation research on the endangered *Astragalus osterhoutii* (Fabaceae). The May picnic and hike at the south end of the Mesa Trail in Boulder Mountain Park brought out a gregarious group, identifying an abundance of spring plants. Good work and good publicity for the Society came from the June 4, 2000 yellow star thistle weed warriors. Record heat and dry weather launched Pat Murphy's active prairie dog town revegetation program, which he discussed in October. Another full house enjoyed Tamara Naumann's botanical exploits at Dinosaur National Monument at our November meeting — we fully expect to see her back next year for more details. At press time we were eagerly anticipating a report on wildland fire ecology by local firefighter and national television fire spokesperson Justin Dombroski. We thank Carolyn Crawford for another fabulous slate of presentations.

The **Denver Chapter** scheduled presentations on a wide range of topics, from taxonomy to gardening with natives. The year start-

ed with Dr. Bill Weber discussing Rocky Mountain plant associations and how they relate to those associations in the Altai Mountains in Central Asia. Ray Spurrier, a naturalist with the South Suburban Park and Recreation District talked about a successful wetland and wildlife habitat restoration project along the South Platte River. Jim Borland, Genessee Open Space Coordinator and native plant enthusiast, discussed landscaping with natives in April, while Shannon Kuchel discussed the status of the green sedge (*Carex viridula*, Cyperaceae) in Colorado at the first regular meeting in October. Dr. Leo Bruederle, who is now assisting Chapter President Denise Larson as Program Chair, described the flora of the Rampart Range in December. We look forward to many exciting and informative Denver Chapter activities in the future.

At this fall's **Plateau Chapter** planning meeting, president Jeanne Wenger asked those members present if we needed to elect a new slate of officers. "The question is," Andrea Robinson asked, "do you wish us to elect a new slate of officers?" Jeanne responded, "I think I'm good for another year. At least until we have to host the next annual meeting." Plateau Chapter members have certainly appreciated Jeanne's leadership as President and the great job she did organizing the Annual Meeting and other Chapter events this year. Attendance continues to be best at workshops, such as those on the Asteraceae by Dr. David Buckner and sphagnum moss identification by Dr. Richard Andrus, as well as seminars presented by experts from outside our area. This year we enjoyed presentations by Dr. Kim Harper and Dr. Rosemary Pendelton discussing various aspects of plant ecology. Dr. Ron Hartman summarized current botanical exploration being conducted in the southern Rocky Mountain region. Weather hampered the success of many of our field trips this year, with dry conditions leading to early flowering or no flowering of many species. The trip to the Black Canyon yielded far fewer flowering shrubs and plants than expected, though we were able to locate juniper tablemustard (*Thelypodopsis juniperorum*, Brassicaceae) and examine individuals of Rocky Mountain thistle (*Cirsium perplexans*, Asteraceae). Dr. James Reveal also pointed out *Castilleja angustifolia* (Scrophulariaceae), a species of paintbrush not listed for the Western Slope Flora, but which is common in Utah. Conversely, the dry conditions made the Chapter weed pull at Ridgway State Park easier. We had anticipated tackling many annuals in the area along the visitor center nature trail, but because of dry conditions, few grew this year. Thus, with the help of Girl Scouts from the Grand Junction area, we were able to focus on *Leucanthemum vulgare*, which has been spreading from flower beds at the visitor center into the native vegetation. The girls and some of their adult leaders needed a bit of convincing that this pretty flower was actually a noxious weed and needed to be



Carex viridula
Artist: Jan Wingate

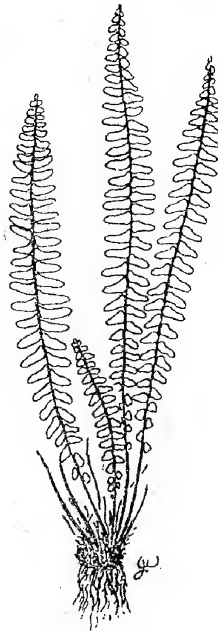
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uprooted! Members of our chapter have also been working on a variety of native plant related projects. Gay Austin was instrumental in designing a display board to be used at events to inform people about CoNPS. We thank the Board for purchasing the panels, Kathy Darrow for her photographs, and Lora Schmillen for printing the text. Bob Clarke has continued helping Dr. Don Sullivan with core sampling on Grand Mesa and developing plant lists for the wetland areas in which Dr. Sullivan is working. Evelyn Horn has continued to teach plant identification classes and coordinate efforts to mount plants for the Montrose BLM Herbarium. Chapter members Betty Hall, Evelyn Horn, and John Moore have also been working with Tri River Extension Master Gardener Sheryl Williams (Betty Hall and John Moore are also Master Gardeners), and other extension and Forest Service personnel to design and construct a native plant garden at the visitors' center on Grand Mesa. The landscaping is done and plants are being grown by Sage Gardens. They expect to plant this spring and summer when the weather permits. Pictures of plants to be included in the garden can be viewed at the CSU Cooperative Extension web site at www.colostate.edu/Depts/CoopExt/TRA/PLANTS/demogardens/grandmesa/mesaplants.html. Plans for this year's activities are being finalized now. Please contact Jeanne Wenger or Lori Sumner with suggestions for field trips or workshops. With your help, we look forward to a successful year in 2001.

Society Committees

The East Slope Workshop Committee completed its 16th season in April, conducting a record-setting 23 workshop classroom sessions covering eight topics. Nearly 130 individuals participated, with total attendance exceeding 330; on average, each individual attended between two and three workshops. Sessions were held in Fort Collins, Denver, and Boulder, with most attendees coming from the Fort Collins - Denver - Colorado Springs urban corridor and nearby towns. However, a growing number are coming from a considerable distance (Cimarron, Gunnison, Crested Butte, Grand Junction, Rifle, Meeker, Aspen, Snowmass, Brush, and Beulah, Colorado; Laramie, Wyoming; and Amarillo and Canyon, Texas). We thank these attendees for their devotion and endurance. While it was necessary to add extra sessions for most workshops, *Carex* and Asteraceae were our big hits of the year, with four sessions each. Our workshop leaders did a great job and we thank them for their hard work in preparation and instruction: Dr. David Buckner (Asteraceae); Bill Jennings (Botanical Detective and Gooseberries); Dr. Robert Dorn (*Salix*); Dr. Leo P. Bruederle (*Carex*); Dr. J. Mark Porter from the Rancho Santa Ana Botanic Garden (Polemoniaceae); Peter Root (Ferns); Dr. Ronald Hartman from the University of Wyoming (Caryophyllaceae); and Bert Epley (Wildflower Photography). The Western Slope Workshop Committee also got off to a grand start with some excellent workshops! Many thanks go to Dr. Ron Hartman

(Botanical Exploration and Caryophyllaceae), Dr. David Buckner (Asteraceae), Evie Horn (Basic Plant Identification), and Dr. Richard Andrus (Sphagnum mosses)! Handouts for many Eastern Slope workshops are available at a small charge by calling Committee Chair Bill Jennings at (303) 666-8348.

*Asplenium platyneuron*

Artist: Jan Wingate

Collins and Boulder. On the schedule for Western Slope Workshops are Dr. David Buckner (Grasses), Jude Sirota (Noxious Weeds), Dr. Robin Bingham (Basic Review of Plant Families), and Jim Borland (Landscaping with Native Plants).

Thanks to the enthusiastic support of our membership, the educational programs presented by both Eastern Slope and Western Slope Workshop Committees continue to be one of the Society's most popular activities.

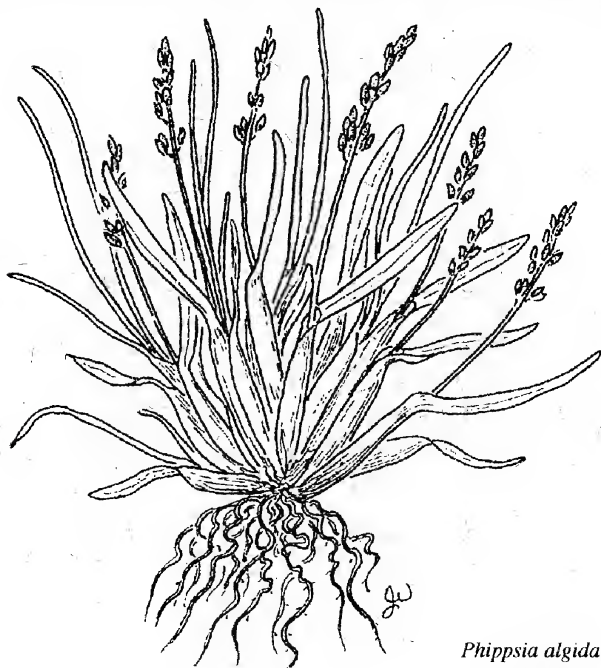
Members of the **Horticulture and Restoration Committee**, now co-chaired by Lisa Tasker and Kathy Damas, made revisions to a list developed several years ago, which is now entitled "Native Plants for Horticultural Use on the Front Range of Colorado." We worked to make it more simple and to include plants that are easily available to homeowners. The new list is available at the CoNPS website, thanks to webmaster Sara Hill. The City of Boulder Public Works Department adopted portions of this native plant list in its recently revised Design Standards manual. The Committee also worked with members of the Louisville Open Space Committee, which considered adopting the native plant list for their use. In early January, CoNPS sponsored a booth at the Denver ProGreen Show, at which five new members were recruited, \$350-\$400 in books was sold, and over 300 copies of the native plant list were distributed. Future plans include developing a picture brochure about propagating native plants.

The **Education and Outreach committee** had a productive year and was able to meet the CoNPS goal of undertaking four educational or outreach activities to reach 500 people each year. In addition to the aforementioned ProGreen Show, which is attended by members of the Green industry, the committee had displays at the Rocky Mountain Arsenal in April, the Crested Butte Wildflower

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Festival in July, and the Poudre Canyon Craft Fair in September. Additional outreach activities were conducted on an ad hoc basis. The committee also updated their East and West Slope displays to reflect the Society's current activities and functions. In addition, we also contributed funds to revise and reprint the Russian olive brochure. Looking forward, the Committee has already committed to having our display at ProGreen in January, 2001, and the Colorado Home and Garden Show in February, 2001. Please contact Jill Handwerk (970) 221-3460 or Alice Guthrie at (303) 651-3127 if you have ideas for outreach activities or are willing to help.

*Phippsia algida*

Artist: Jan Wingate

Under the leadership of Bob Clarke (Chair) and Eric Lane, the **Conservation Committee** compiled and provided comments on the White River National Forest Plan revision. The Committee also advocated for Colorado native plants by providing suggestions for a native plant list for the "Plant Palette for the East side parcel of Crested Butte Mountain Resort;" writing a letter to Colorado College asking them to remove all salt cedar (*Tamarix* spp.) from their campus; expressing CoNPS concerns with regard to the introduction of international plants by the Denver Botanic Garden into the region; providing support for Louisville's open space inventory and assessment grant request to Great Outdoors Colorado; writing a letter of concern and information to the city of Louisville regarding weeds, the Colorado Noxious Weed Law, and state and county resources for assistance; and participating with the Louisville Open Space Advisory Board to support plans for weed control and use of native plants in open space revegetation. Conservation activities also involved CoNPS chapters directly, most notably the Boulder Chapter, which conducted a yellow star thistle (*Centaurea solstitialis*, Asteraceae) weed pull on Sunday, June 4. Members of the Boulder Chapter coordinated with Cindy Owsley (Boulder County Weed Manager) to remove Scotch thistle (*Onopordum* sp., Asteraceae), houndstongue (*Cynoglossum officinale*, Boraginaceae), common tansy (*Tanacetum* spp., Asteraceae) and Dalmation toadflax, (*Linaria*

dalmatica, Scrophulariaceae). The group was accompanied by a reporter and photographer, with an article illustrating the event appearing in the *Boulder Daily Camera* the next day. As part of the Louisville Prairie Preservation Project, several Chapter members succeeded in saving a 1.5 acre parcel of shortgrass prairie last fall. Carolyn Crawford and Caryl Shields have continued a site inventory, picking up trash, pulling weeds, and monitoring new prairie dog holes in the process. Letters to the city and comments to the Open Space Board have resulted in a commitment to maintaining the parcel prairie dog-free in order to save the vegetation. The small prairie dog colony will be moved to Open Space on Davidson Mesa. Members continue to work with the Parks Department on appropriate native prairie and foothill species for plantings in the city park adjacent to the preserved prairie. Other activities included the relocation of so-called "Lost Plants." Rich Scully coordinated the effort to locate 40 species, with Bill Jennings, Nan Lederer, and Ron Abbott providing assistance and expertise. Species relocated included *Phippsia algida* (Poaceae), *Betula papyrifera* (Betulaceae), and *Aquilegia saximontana* (Ranunculaceae). The Denver Chapter also conducted conservation activities, including a survey of Grey's and Torrey's Peaks, during which seven new locations for species tracked by CNHP were identified; while the Southwest Chapter led a field trip to Narraguinnep Research Natural Area, June 16, to evaluate plant communities in that area. A species list was generated and submitted to the Field Studies Committee.

The **Publications Committee** published five issues of *Aquilegia* in 2000, with a sixth special issue in preparation. In addition to consolidating all operations for publication of the newsletter to the University of Colorado at Denver, the Board decided to forgo bulk mailing to ensure timely receipt of *Aquilegia* across the State. However, the institution of first class mailing necessitated a slight increase in dues, which was approved by the Board. The CoNPS website, which continues to be maintained by Sara E. Hill, increased in accessibility and utility. In addition to CoNPS field trips, workshops, and lectures, committee activities, photographs, and links to native plant resources are available at www.conps.org.

Editor's note: It is truly humbling to see the energy, enthusiasm, and activity of our Society and chapter officers; committee chairs and members; workshop and field trip leaders and coordinators; Annual Meeting organizing committee; speakers; and numerous other volunteers, who work in a variety of capacities. With the population of Colorado continuing to increase and the apparent elimination of the Colorado Natural Areas Program, CoNPS has its work cut out. Help us conserve our native flora by renewing your membership, contributing to one of our endowments, and volunteering in some capacity.

State's Natural Areas Program on the Rocks

The Colorado Natural Areas Program (CNAP) is losing all state funding. For more information, see the *Boulder Daily Camera* news article at the following web site:

<http://www.bouldernews.com/recreation/ecology/19gcol.html>

Look for an informational letter and appeal for help from CNAP to be mailed to all CoNPS members within the next couple of months.

COLORADO NATIVE PLANT SOCIETY DISCOUNTED PUBLICATIONS

The following items are provided at a discount as a service to our members.

They are also available at many of our meetings and workshops (Save postage!)

BOOK TITLE OR ITEM	AUTHOR	COST	SHIP	NO.	Book Total	Shipping Total
Alpine Flower Finder	Wingate, J. et al	\$4.50	\$2.00			
Alpine Wildflowers (Northern Rocky Mts.)	Strickler, D.	\$7.50	\$2.00			
Alpine Wildflowers of the Rocky Mountains	Duft, J.F et al.	\$11.00	\$2.00			
American Cockerell	Weber, W.A.	\$24.00	\$2.75			
Atlas of the Grasses of Colorado	Rubright, L.	\$15.25	\$2.00			
Botanical Latin	Stearn, W.T.	\$38.00	\$2.75			
Botany for Gardeners	Capon, B.	\$15.00	\$2.00			
Catalog of the Colorado Flora: A Biodiversity...	Weber, W. et al.	\$40.00	\$3.25			
Chance and Change for Conservationists	Anderson, J.	\$21.00	\$2.75			
Collecting, Process. & Germ. Seeds of Wildland Pl	Young, J. et al.	\$21.00	\$2.75			
Colorado: 1870-2000	Fielder	\$71.00	\$5.00			
Colorado's Best Wildflower Hikes V1 Frnt Range	Irwin,	\$15.00	\$2.75			
Colorado's Best Wildflower Hikes V2 High Cntry	Irwin,	\$17.25	\$2.75			
Colorado's Canyon Country	Pearson/Fielder	\$15.00	\$2.00			
Colorado's Wetland Ecosystems	CONPS	\$0.40	\$0.75			
Common Flora of the Playa Lake	Haukos, D. et al.	\$16.00	\$2.00			
Desert Smells Like Rain, The	Nabham, G.	\$10.00	\$2.00			
Desert Wildflowers of North America	Taylor, R.J.	\$18.50	\$2.00			
Dictionary of Word Roots	Borror, D.J.	\$9.00	\$2.00			
Edible and Medicinal Plants of the West	Tilford, G.L.	\$16.50	\$2.00			
Edible Native Plants of the Rocky Mountains	Harrington, H.D.	\$15.00	\$2.50			
Edible Wild Plants of the Prairie	Kindscher, K.	\$10.50	\$2.00			
Encyclopedia of Ornamental Grasses	Greenlee, J.	\$24.25	\$2.75			
Enduring Seeds	Nabham, G.	\$11.50	\$2.00			
Familiar Cacti of North America	Heil, K. et al.	\$6.50	\$2.00			
Field Guide to Canyon Country Wildflowers	Fagan, D.	\$12.00	\$2.00			
Flora and Vegetation of Needle Mountains	Michener-Foote	\$4.00	\$2.00			
Flora of North America V. 1	FLNA Ed.	\$77.00	\$3.25			
Flora of North America V. 2	FLNA Ed.	\$77.00	\$4.00			
Flora of North America V. 3	FLNA Ed.	\$77.00	\$4.00			
Flora of North America V.22	FLNA Ed.	\$77.00	\$4.00			
Flora of the Great Plains	Grt Plns Flra Ass.	\$44.00	\$3.75			
Flora of the San Juans	Komarek, S.	\$15.50	\$2.00			
Floristic Survey of Boulder Mountain Park	Hogan, T.	\$4.00	\$2.00			
Floristic Survey of Eagles Nest Wilderness Area	Hogan, T.	\$4.00	\$2.00			
Floristic Survey: Black Forest	Maley, A.	\$3.00	\$2.00			
Floristic Survey: Mesa de Maya Region	Clark, D.A.	\$4.00	\$2.00			
Flowering Plants of the World	Heywood, V.H.	\$53.00	\$4.00			
Forest Wildflowers (Northern Rocky Mts.)	Strickler, D.	\$7.50	\$2.00			
Forgotten Pollinators	Nabham, G.	\$14.00	\$2.00			
Gardener's Guide to Plant Conservation, The	Marshall, N.T.	\$5.00	\$2.00			
Gathering the Desert	Nabham, G.	\$15.50	\$2.00			
Grass Varieties in the USA	Lewis & Sharp	\$43.00	\$3.75			
Guide to Colorado Birds	Gray, M.T.	\$17.00	\$2.00			
Guide to Colorado Wildflowers, V1, Plains	Guennell, G.K.	\$18.75	\$2.75			
Guide to Colorado Wildflowers, V2, Mountains	Guennell, G.K.	\$18.75	\$2.75			
Handbook of Rocky Mountain Plants	Nelson, R. (rev)	\$16.00	\$2.75			
How to ID Grasses & Grasslike Plants	Harrington, H.D.	\$10.00	\$2.00			
How to Identify Plants	Harrington et al	\$10.00	\$2.00			
Illustr. Keys to Early Spring Wildflowers: Frnt Rnge	Wingate, J.L.	\$1.50	\$1.25			
Illustrated Keys to the Grasses of Colorado	Wingate, J.L.	\$7.50	\$2.00			

Intermountain Flora - Volume 1	Cronquist et al.	\$29.00	\$3.25		
Intermountain Flora - Volume 3A	Cronquist et al.	\$66.00	\$3.75		
Intermountain Flora - Volume 3B	Barneby, R. C.	\$53.00	\$3.75		
Intermountain Flora - Volume 4	Cronquist et al.	\$66.00	\$3.75		
Intermountain Flora - Volume 5	Cronquist, A.	\$66.00	\$4.00		
Intermountain Flora - Volume 6	Cronquist et al.	\$66.00	\$4.00		
John Charles Fremont, Botanical Explorer	Welsh, S.L.	\$41.00	\$2.75		
Life in an Aspen Grove - video	CONPS	\$20.00	\$3.50		
Medicinal Plants, Mountain West	Moore, M.	\$11.00	\$2.00		
Medicinal Wild Plants of the Prairie	Kindscher, K.	\$10.50	\$2.75		
Mushrooms of Colorado	Evenson, V.S.	\$18.75	\$2.75		
Native and Naturalized Leguminosae of U.S.	Iseley, D.	\$56.00	\$4.00		
Penstemons	Nold, B.	\$25.00	\$2.50		
Plant Book, The	Maberly	\$45.00	\$2.75		
Plant Identification Terminology	Harris, J. et al	\$15.00	\$2.75		
Plant Survival	Capon, B.	\$14.00	\$2.00		
Plants of Florissant Fossil Beds Nat'l Mon.	Edwards et al	\$2.50	\$2.00		
Plants of Rocky Mountain National Park	Beidleman	\$22.50	\$2.50		
Plants of the Rocky Mountains	Kershaw et al.	\$16.50	\$2.75		
Prairie Garden, A Step-by-Step Guide..shortgrass	Brune, R.	\$4.50	\$1.25		
Prairie Wildflowers (Northern Rocky Mts.)	Strickler, D.	\$7.50	\$2.00		
Rare Plants of Colorado II	CONPS	\$14.00	\$2.75		
Rocky Mountain Berry Book	Krumm, B.	\$9.00	\$2.00		
Rocky Mountain Flower Finder	Wingate, J.L.	\$4.00	\$2.00		
Rocky Mountain Lichen Primer	Corbridge et al.	\$15.00	\$2.00		
Sagebrush Country: A Wildflower Sanctuary	Taylor, R. J.	\$11.00	\$2.00		
Scat and Tracks	Halfpenny, J.	\$7.50	\$2.00		
Simplified Guide to Common Colorado Grasses, A	Wingate, J.L.	\$3.25	\$1.25		
Southern Rocky Mountain Wildflowers	Robertson, L.	\$12.50	\$2.00		
Southwestern Landscaping with Native Plants	Phillips, J.	\$20.25	\$2.75		
Strange Genius, Life of F.V. Hayden	Foster, M.	\$23.50	\$2.75		
Systematics and Evolution of Oenothera cespitosa	Wagner, W. et al	\$10.00	\$2.00		
Tallgrass Prairie Wildflowers	Ladd, D.M.	\$15.00	\$2.75		
Tote Bags	CONPS	\$16.00	\$2.75		
T-shirts long sleeve \$16.00	CONPS	\$16.00	\$2.00		
T-shirts short sleeve \$13.00 or 2 for \$25.00	CONPS	\$13.00	\$2.00		
T-shirts, Terry	CONPS	\$20.00	\$2.75		
Utah Flora, A, 1993 edition	Welsh S. et al.	\$68.00	\$3.75		
Vascular Plants, Boulder County, Checklist	Weber, W.A.	\$4.00	\$2.00		
Waterwise Landscaping w/ trees, shrubs, vines	Knopf, J.	\$21.00	\$2.75		
Weeds of the West	Whitson, T., Ed.	\$18.00	\$3.75		
Wild about Wildflowers	Warren, K.D.	\$16.00	\$2.00		
Wildflowers of the Plateau & Canyon Country	Ulrich, L. et al	\$15.00	\$2.75		
Xeriscape Flower Gardener	Knopf, J.	\$15.50	\$2.75		

Please add the following taxes

where applicable:

City of Boulder: 7.36%

All other Boulder County: 4.1%

City and County of Denver: 7.3%

Ft. Collins: 6.7%

All other Larimer County: 3.7%

Adams, Arapahoe, Jefferson Counties: 3.8%

All other Colorado: 2.9%

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phone: 303-794-5432

BE SURE TO INCLUDE NAME, ADDRESS, AND DAYTIME PHONE.

SOCIETY NEWS AND ANNOUNCEMENTS

Minutes of the CoNPS Board Meetings

Alice Guthrie, CoNPS Secretary

November 4, 2000 (Approved December 2, 2000)

Treasurer's Report: Expenses for the Annual Meeting totaled \$1752.18, while income was \$885.00. Sales of books, t-shirts, and other merchandise totaled \$5000.

Committee reports: Eric Lane (**Membership**) reported that membership in the Society totaled 621, of which 561 join or renew annually and 60 are life members or receive membership in exchange. Renewal notices will go out in December, with a follow-up in a subsequent newsletter. Tina Jones and Rob Reinsvold resigned as **Education Committee** Co-Chairs, while Rick Brune resigned as **Field Trip** Committee Chair after many years serving in this capacity. Denise Culver submitted her resignation as **Treasurer** effective December 2000, but indicated that she is willing to serve on the **Finance Committee**.

Old Business: The Board reviewed a draft definition of "native plant" from the September meeting and suggested additional points for clarification. Gay Austin will revise the document accordingly for Board review and approval at the December meeting.

New Business: The Board reviewed the goals, objectives, and activities of **standing committees**, approving several changes. Alice Guthrie will coordinate these revisions for review by the Board at a subsequent meeting. The Board voted to disband Legislative Affairs and move its functions and objectives to Conservation. The Board voted to subsume the Publicity Committee and its objectives within the Education Committee, renamed Education and Outreach. Neil Snow volunteered to chair and make recommendations with regard to the objectives of the Field Studies Committee, which was set up to make field collections of specific areas for herbaria; as such, current activities maintaining plant lists aren't strictly in alignment with original objectives. Denise Culver will co-chair the Finance Committee, as discussed by the Board in April, 2000, and coordinate the development of objectives for this Committee, as well as identify a co-chair. Many of the objectives of the Publications Committee have been taken over by the Newsletter Committee. However, sales of merchandise, including books and t-shirts have been added. As such, the Board voted to rename the Publications Committee to reflect its objectives; the committee will be renamed Sales, effective January, 2001. Committees and Chairs follow:

Conservation: Dave Anderson, Interim Chair.

Education/Outreach: Alice Guthrie and Jill Handwerk, Co-Chairs.

Field Studies: Neil Snow, Chair

Field Trips: Gwen Kittel

Horticulture and Restoration: Kathy Damas and Lisa Tasker, Co-Chairs

Legislative Affairs: Disbanded and moved into Conservation Committee

Membership: Eric Lane, Chair

Newsletter: Leo Bruederle, Chair

Sales: Velma Richards and Rick Brune, Interim Co-Chairs

Publicity: Disbanded and moved into Education and Outreach.

Rare Plant Monograph: Eleanor von Barga, Chair

Web site: Bob Clarke, Chair

Workshops: Bill Jennings (Eastern Slope) and Gay Austin (Western Slope), Co-Chairs

With regard to membership, the Board approved a **dues increase** for individuals to \$15 and family memberships to \$20, keeping other categories the same. The **membership brochure**, for which a graphic artist has volunteered to prepare the layout, will be revised and reprinted by January 2, 2001 for the ProGreen Show in Denver. The Education and Outreach Committee will send an introductory letter with an invitation to join the Society along with an issue of *Aquilegia* to organizations recommended by chapter presidents. Members were asked to post their old newsletters and submit names of places to receive the newsletter. The Board approved CoNPS **business cards** with general contact info. Committee and Chapter Reports will be submitted electronically to the Secretary for distribution and approval at the next Board meeting. The **Colorado Natural Areas Program** (CNAP) has been disbanded, effective July 2001. Jill Handwerk and Denise Culver will draft a letter to the Colorado Division of Wildlife on behalf of CoNPS and alert the membership to write letters. Chapter presidents should advise their chapters accordingly.

Future agenda topics: Budget 2001, native plant definition, committee assignments, membership directory, strategic plan review, and Steinkamp Fund.

25th Anniversary Poster Contest

In honor of our 25th anniversary, the Colorado Native Plant Society is holding a poster contest. In addition to celebrating our anniversary, the poster will be made available for sale as a fundraiser for the Society. All artists are invited to submit an original drawing, painting, or photograph. The CoNPS Board will select the winner this summer, with the poster printed in time for the 25th Anniversary Annual Meeting hosted by the Fort Collins Chapter. All submissions will become property of CoNPS. If you have questions, please contact Pat Ploegsma (Director) at (303) 229-3007 (cell) or (307) 633-3071 (w), or Jill Handwerk (CoNPS President) at (970) 491-5857 (w) or (970) 221-3460 (h).

AQUILEGIA Deadline Approaches

Submit on or before February 15, 2001

Please submit contributions for Vol. 25 No. 3 of *Aquilegia* on or before February 15, 2001. Include author's name, address, and affiliation. Follow the format from previous issues of *Aquilegia* as closely as possible. Spell check. Previously published articles submitted for reprinting require permission from the editor of original publication. Articles and announcements extracted from other sources require name and address of source. Articles submitted via e-mail or on disks — MAC preferably, or IBM — are much appreciated. Please submit the contribution as a MS Word or RTF (rich text format) document.

SOCIETY NEWS AND ANNOUNCEMENTS

Help!

The Board is requesting your help with the following:

Donation of a folding table, 5-6 feet long, for Society displays. Please contact Alice Guthrie at (303) 651-3127.

Volunteer opportunities:

Volunteers needed to help set up and resupply an educational booth at the **Colorado Home and Garden Show** February 10-18, 2001. Contact Jill Handwerk at (970) 221-3460.

Volunteers needed to assist the **Field Trip, Research Grants, and Sales Committees** in their activities. For more information and to volunteer, contact Jill Handwerk at (970) 221-3460.

The Finance Committee and Treasurer are seeking the donation of a **laptop computer**, specifically, a pc with a minimum 4 GB hard drive, pentium II, 64 mb ram. Contact Denise Culver at (970) 225-1930.

Information needed: CoNPS is compiling a list of fairs and shows at which to educate the public about the Society. If you know of local or county shows that would be appropriate, please call Alice Guthrie (303) 651-3127 with the name, contact information, and general dates of the venue.

CoNPS to Co-sponsor Events featuring Gary Nabhan, Ethnobotanist

Attention members! As part of an exciting four-day weekend of events co-sponsored by CoNPS, ethnobotanist, naturalist, and author Gary Nabhan will be the speaker at a CoNPS event to be held April 7, 2001. For more information, contact Jill Handwerk at (970) 221-3460 or watch for an announcement in the next issue of *Aquilegia*.



Water cress

New CoNPS Treasurer

The Board is pleased to report that **Georgia Doyle** (Fort Collins Chapter) will be taking over responsibilities as State Treasurer from Denise Culver, effective immediately. Georgia may be contacted c/o Colorado Native Plant Society at P.O. Box 200, Fort Collins, CO 80522, by phone at (970) 491-6477, or by email at georgiad@lamar.colostate.edu. The Board thanks Denise for many years of service in this capacity, and looks forward to continuing to work with Denise, who will co-chair the Finance Committee.

2001 Dues Reminder

Please check your mailing label. If it does not say "Paid Thru 2001" (or later), your dues are now due. Remember, CoNPS dues cover a calendar year. If you are not paid through 2001, please send your renewal to: Colorado Native Plant Society, P.O. Box 200, Fort Collins, CO 80522. This could be your last newsletter, renew today!

Board Meetings Scheduled

Board Meetings have been scheduled for the following dates and locations. All members are welcome to attend. For more information, please contact Alice Guthrie at (303) 651-3127.

February 24, 2001	Longmont Public Library, Longmont, CO
March 31, 2001	Longmont Public Library, Longmont, CO
May 5-6, 2001	Grand Junction, CO

Salsola paulsenii in Colorado

William A. Weber

A new and potentially invasive tumbleweed has shown up in southwestern Colorado. Marilyn Colyer, naturalist at Mesa Verde National Park, discovered *Salsola paulsenii* Litvinov (Chenopodiaceae) recently in sandy soil in the lower reaches of the San Juan River Valley in the Four Corners of Montezuma County. This alien plant species was first detected in North America by Alice Eastwood near Barstow, California, in 1913; but was not recognized by name until it was discovered to be abundant throughout the deserts of Nevada, Utah, and northern Arizona. This is an enormous and exceedingly stiff and prickly Russian-thistle that California entomologists since 1950 have dubbed the "Barb-wire Russian thistle." At the request of the late Janice Beatley, who worked on the flora of a part of southern Nevada in 1967, I was able to get a reliable identification from the Russian specialist V. Botchantsev. Beatley later published a paper that very nicely contrasted this species with our common Russian-thistles (*Salsola australis* R. Brown [*S. iberica* Sennen & Pau.] and *S. collina* Pallas). See: Beatley, J. C. 1973. Russian-thistle (*Salsola*) species in Western United States. *Journal of Range Management* 26: 225-226.

Until this year, *S. paulsenii* had not been discovered in Colorado, and there was some reason to believe if found here, it might be limited in its invasive power by the absence of extremely hot desert areas. However, now that it has been found in Montezuma County, it might be expected to occur in the drainages of the Colorado, Dolores, and Green rivers.

In contrast to *S. australis*, *S. paulsenii* becomes extremely large, over 100 cm tall. It is very stout and prickly throughout, even when young. Interestingly, a recent television ad shows several plants rolling across a presumably North American desert. NOTE: Weed-control personnel can probably locate Janice Beatley's paper in their libraries, but in the event that anyone needs a copy, Wm. A. Weber would be happy to provide the article to someone willing to circulate it among CoNPS members.

NATURAL HISTORY CLASSES

Boulder County Nature Association Winter - Spring 2001 Classes

Winter Ecology at Snow Mountain Ranch

Instructor: Dr. Joyce G. Gellhorn

This BCNA course focuses on the dynamics of winter weather and changes within the snow cover, as well as the adaptations of plants and animals to winter conditions. On the Saturday and Sunday field trips, we will ski or snowshoe from Snow Mountain Ranch. Features of winter to be examined include: snow physics and metamorphosis; avalanche awareness; animal tracks and tracking; and plant identification. The evening program emphasizes special features of winter using slides taken in the Rocky Mountains.

Dates and times:

Saturday, March 3, 2001: skiing or snow shoeing from 10:00 AM to 4:30 PM

Saturday, March 3, 2001: indoor session from 7:30 PM to 9:00 PM.

Sunday, March 4, 2001: skiing or snow shoeing from 9:00 AM to 2:30 PM.

Accommodations: We have a five-bedroom cabin with kitchen facilities at Snow Mountain Ranch. The cabin sleeps twelve adults. Plan to bring something to share for a potluck dinner on Saturday night, as well as your own breakfast and lunches.

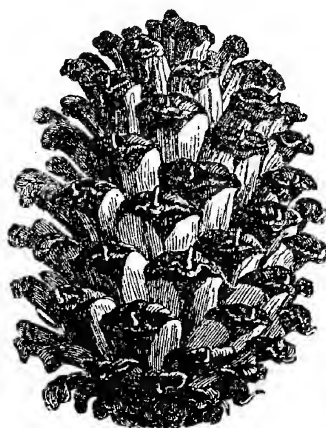
Optional Texts: *Life in the Cold: An introduction to winter ecology* by Peter J. Marchand; and *Winter: An ecological handbook* by James C. Halfpenny and Roy Ozanne.

Equipment: Snowshoes or skis and poles; winter clothing with layers; and a 10x magnifying hand lens

About the Instructor: Winter is Dr. Joyce Gellhorn's favorite season in the Rocky Mountains. Gellhorn has taught field classes in Boulder County for 25 years to students ranging in age from four to 84. She teaches classes at the University of Colorado's Mountain Research Station, and has taught for Boulder Valley Schools, CU Continuing Education, Rocky Mountain Nature

Association, Elderhostel, Keystone Science School, and Teton Science School.

Registration: Send a check made out to BCNA for \$100 (BCNA members \$90) to Joyce Gellhorn, 112 Deer Trail Rd., Boulder, CO 80302. For more information, contact Joyce Gellhorn at (303) 442-8123 or via e-mail at jgellhorn@sprynet.com.



Pinus aristata

Identification of Spring Wildflowers

Instructors: Joyce Gellhorn and Susan Parks Halabrin

This course focuses on identification of flowering plants on the East Slope of the Front Range in Boulder County. General principles of taxonomy will be taught, along with identifying features of major plant families. Emphasis will be placed on learning to use taxonomic keys to identify native plant species. Taxonomic and ecological features of flowering plants will be examined during the all day Saturday field trips. Part I is for the beginner, while Part II expands on the concepts learned in Part I.

Dates and times:

Session I: Thursday evenings on April 26 and May 3, 2001 from 6:30 PM to 9:30 PM.

Saturday field trip on May 5, 2001 from 9:00 AM to 3:00 PM.

Session II: Thursday evenings on May 10 and May 17, 2001 from 6:30 PM to 9:30 PM.

Saturday field trip on May 19, 2001 from 9:00 AM to 3:00 PM.

Texts: *Rocky Mountain Flora* by Wm. A. Weber; *Rocky Mountain Flower Finder* by Janet L. Wingate; and *Rocky Mountain Plants* by Ruth A. Nelson.

Equipment: 10x magnifying hand lens; dissecting needle; and a knife or razor.

About the Instructors: Dr. Joyce Gellhorn has taught field classes in Boulder County for 25 years to students ranging in age from four to 84. She teaches classes at the University of Colorado's Mountain Research Station, and has taught for Boulder Valley Schools, and CU Continuing Education, among others. Susan Parks Halabrin teaches biology at Front Range Community College and has assisted Joyce in teaching field courses during the past three years.

Registration: Costs are \$65 for Session I or II (\$55 for BCNA members); and \$120 for both Sessions I and II (\$105 for BCNA members). Send a check made out to BCNA to Joyce Gellhorn, 112 Deer Trail Rd., Boulder, CO 80302. For more information, contact Joyce Gellhorn at (303) 442-8123 or via e-mail at jgellhorn@sprynet.com.

Teaching Aids Needed for New Native Plant Course

The Department of Horticulture and Landscape Architecture at Colorado State University has developed a new course (H381) "Native Plants in the Landscape." Teaching aides (slides and mounted, labeled plant specimens) are needed develop a laboratory section for this important effort. The plant list can be viewed at www.conps.org. Please address questions to CoNPS Board Director Laurel Potts at kalmia@lamar.colostate.edu. Donated teaching aides may be sent to Dr. Stephen J. Wallner, Chair, Department of Horticulture and Landscape Architecture, Rm. 111 Shepardson, Colorado State University, Fort Collins, CO 80523-1173.

NEWS AND ANNOUNCEMENTS

CeRSER Ecological Restoration Conference April 26-27, 2001

The Central Rockies Chapter of the Society for Ecological Restoration announces a very exciting regional conference: **"Restoring the Rockies: Restoration and Conservation Strategies in the West,"** to be held on Thursday and Friday, April 26-27, 2001 in Keystone, Colorado. With multiple organizations throughout the Rockies now practicing restoration within a diversity of ecosystems, a meeting to exchange strategies and bring together a wide variety of individuals, groups, and coalitions should be of service to all. In addition to exchange of ideas, the hope is that the conference will also help organizations form alliances so as to better ensure the long-term survival of our diverse historical ecosystems within the Rocky Mountain Region.

Keystone Resort is only 75 miles from Denver and more conveniently located than the Front Range for folks coming from west of the continental divide. The resort claims the largest, most versatile meeting facilities in Colorado to say nothing of the surroundings and recreational activities. Rates should be very reasonable, as late April is low season for Keystone. Don't miss this exciting opportunity to find out more about the practice of ecological restoration in your local ecosystems and how it relates to the bigger goal of conserving our native plant communities.

For the most up to date information, please e-mail lisatasker@earthlink.net. A link to the Central Rockies Chapter may be found at the international SER website at www.ser.org.

War on Weeds: Winning it for Wildlife and Wilderness Public Lecture on January 16, 2001

The rapid spread of weeds across western wildlands is causing severe damage to wildlife habitat, wilderness values, and other important resources. You are invited to a 45 minute slide program presented by Jerry Asher of the Bureau of Land Management in Portland, Oregon on the scope, impacts, and solution to this accelerating problem. The program will begin at 7:00 PM on Tuesday, January 16, 2001 in the Boulder Public Library Auditorium located at 1000 Canyon Blvd. in Boulder.

Mr. Asher is a nationally renowned speaker and passionate champion for the cause of protecting public land habitats from destruction by noxious weed invasions. He has authored and been interviewed for numerous publications on this subject - most notably *Audubon's Killer Weeds* by Ted Williams.

Hope to see you there! For more information or for hard copies of flyers contact Cindy Owsley of Boulder County Parks and Open Space at (303) 678-6110 or by e-mail at cxopa@co.boulder.co.us



Colorado Butterfly Plant declared Threatened Kierán Suckling, Center for Biological Diversity

In response to a lawsuit by the Center for Biological Diversity and the Biodiversity Legal Foundation, the U.S. Fish & Wildlife Service declared the Colorado butterfly plant as an endangered species on October 18, 2000. The suit was argued by Jay Tutchton of Earthjustice (Denver).

The butterfly plant is found only in southeastern Wyoming, western Nebraska, and northern Colorado. Only ten of the remaining 14 populations are considered stable or increasing. Two occur in a "research natural area" on F.E. Warren Air Force Base in Wyoming. The remaining 12 are on private lands. It is threatened by water development, herbicide spraying, mowing, and conversion of meadows to agriculture and suburban sprawl.

NOTE: The aforementioned was communicated on October 25, 2000 (No. 258) by Kierán Suckling, Science and Policy Director at the Center for Biological Diversity in Tucson, Arizona. For more information about the Center, visit their web site at www.biologicaldiversity.org.

Native Seed Conference Announced

Seeds for the Future, a national native wildflower and grass seed production conference will be held in Orlando, Florida on April 19-20, 2001. For registration information, please call Nancy at (850) 922-7206.

The demand for regionally adapted native wildflower and native grass seed exceeds the supply, a gap that will widen given the growing interest in restoration of natural habitat, use of native plants, conservation, ecotourism, and recent policy directives at the Federal, State and local levels. This conference will highlight the status and needs of the native seed industry, as well as those of consumers in the private and public sectors.

Issues to be addressed will be of interest to: those involved or interested in producing native seed; farmers seeking alternative crops; agencies at all levels affected by native plant policies; those involved with restoration or mitigation; and commercial and residential developers seeking natural aesthetic solutions. Topics will include: technical information; seed certification and standards; market research; western, midwestern, southern, and eastern producers' "how-to's" shared, and more. This practical conference will also serve to network potential producers and consumers in this emerging market.

NOTE: The aforementioned was communicated on December 11, 2000 by the Plant Conservation Alliance via the list serve: native-plants@envirolink.org. For more information about the Plant Conservation Alliance, which is a consortium of ten federal government Member agencies and over 145 non-federal Cooperator representing various disciplines within the conservation field, visit their web site at www.nps.gov/plants/.

MARR FUND: Reports from Recipients

Riparian Vegetation of the Plains

Or

Why my arms are scratched up?!

Gwen Kittel

It was hot, about 100° F in the shade. A new record high, they said, for La Junta. Sweat trickled down my face, obscuring an already limited view through mosquito netting. Coyote willow (*Salix exigua* Nutt., Salicaceae) and common reed (*Phragmites australis* (Cavanilles) Trinius ex Steudel, Poaceae) towered over my head. Ouch! Another mosquito manages to get through, despite layers of bug spray and netting. And to think this place used to be covered in tamarisk, I say to myself as I continue along the transect. "It could be worse, remember yesterday's plot," my colleague Lisa says, as expletives emit from the shrubs within close proximity. "Don't remind me," I reply!

The banks of the Arkansas River look pretty good here — almost as they did in 1844, when Fremont traveled through eastern Colorado, resting his heels at Bent's Fort. Today, large arching cottonwood trees offer relief from the intense sun. Native grasses of western wheatgrass (*Pascopyron smithii* (Rydberg) Love, Poaceae), prairie sand dropseed (*Sporobolus cryptandrus* (Torr.) A. Gray, Poaceae), and vine mesquite grass (*Panicum obtusum* Humboldt, Bonpland, & Kunth., Poaceae) make a fine carpet for picnic in the shade. "How did the pioneers manage, coming across the plains at 10 mph, with no air conditioning, and no Conoco gas stations to get an ice-cold coke," I wonder to myself during our break.

What were we doing out there in the mid-day sun, anyway? Let's just say that we have to change that old adage to: "Only mad dogs and botanists go out in the midday sun!" In the summer of 1998, we were sampling the riparian vegetation along the Arkansas River to describe native riparian communities in Colorado. At Bent's Fort, an intensive tamarisk removal program had been underway for about two years, revealing native riparian vegetation. Luckily, tamarisk had not completely replaced all of the native riparian species, only hidden them. Many native cottonwoods, grasses, and forbs are still present. At other locations along the Arkansas, tamarisk can be quite thick, without any native understory species left.

That summer, we sampled as many physical habitats of streams and rivers of the eastern plains as possible, from small, first-order grassland tributaries with names like Belly-ache Creek to large alluvial rivers, such as the Purgatory and Arkansas. Some interesting patterns emerged. We found stands of plains cottonwood (*Populus deltoides* H. Marshall ssp. *monilifera* (Aiton) Eckenwalder, Salicaceae) with several different assemblages of grasses in the understory, depending on the soil properties. Fine, clayey soils supported a mixture of western-wheatgrass and vine mesquite grass. Coarse, sandy soils with low alkalinity supported prairie sand dropseed. Other sites, with more variable soil textures, but consistently higher alkaline content, supported either

alkali sacton (*Sporobolus airoides* (Torr.) Torr., Poaceae) or tall dropseed (*Sporobolus asper* (Michx.) Kunth, Poaceae). We found repeated stands of all four types on the Arkansas, Purgatory, and Cimeron Rivers.

Other unique finds in the Arkansas watershed were stands of Great Plains false willow, also known as Rio Grande seepwillow (*Baccharis salicina* Torr. & Gray, Asteraceae) along the Cimeron River, where it grows in saline, sandy, alluvial soils right at the waters edge. Pockets of vine mesquite grass - false buffalo grass (*Buchloe dactyloides* (Nutt.) Engelm., Poaceae) mesic grassland were observed in moist swales and overflow channels along Chico Creek near Pueblo and on the Purgatory River floodplain. Interestingly, none of these communities were found in the South Platte River drainage, possibly due to differences in bedrock geology. The Arkansas drainage is underlain by more limestone and, therefore, soils are more alkaline; while the South Platte drainage is dominated by granitics and silics, providing more acidic substrates.

The Colorado Natural Heritage Program received a grant from the National Fish and Wildlife Foundation to complete a statewide classification of riparian communities. This grant would not have been available without the generous support of matching dollars. Thanks to the Colorado Native Plant Society's John Marr Research Fund, Colorado Riparian Association, City of Boulder, Colorado Natural Areas Program, The Nature Conservancy's Colorado Field Office, and State Department of Health for contributing to this project.

For more information about riparian classification, the final report "A Classification of Riparian Wetland Plant Associations of Colorado: A Users' Guide to the Classification Project" can be downloaded off the web at www.cnhp.colostate.edu.



Cottonwood

Artist: Gary Bentrup

MARR FUND: Reports from Recipients

Floristic Inventory of the Southern Gunnison Basin Melanie Arnett

I am currently working on my master's degree doing a floristic inventory of the southern Gunnison Basin, Colorado. The boundaries of this project are U.S. Hwy 50 to the north, the Continental Divide to the east and south, and Cimarron Ridge to the west. Elevation ranges from ca. 7,000' near Cimarron to 14,309' at the top of Uncompahgre Peak. I spent two summers collecting in as much of this region (ca. 1500 mi²) as possible, with the result being more than 8500 collections. The Colorado Native Plant Society's John W. Marr Fund graciously provided me with partial funding for the second summer of fieldwork.

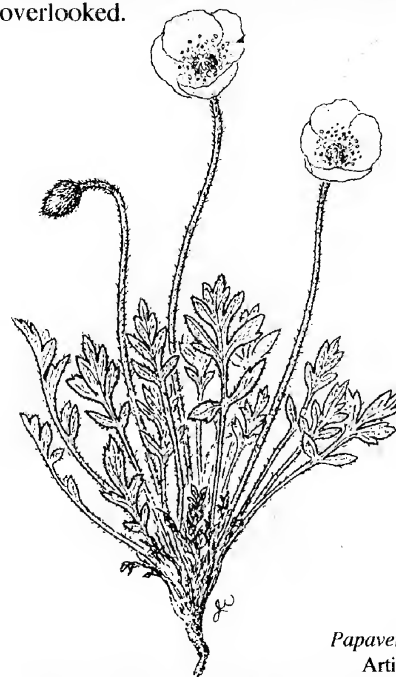
Joseph Barrell botanized the Gunnison Basin in the early 1950's, working out of the Rocky Mountain Biological Laboratory located in Gothic. After a considerable period of time working in the Basin, Barrell set forth the hypothesis that the Gunnison Basin served as an isolated refuge for plants during the later part of the Pleistocene. He was particularly impressed with the unity of the flora of the Gunnison Basin and described it as a "natural area," as opposed to such artificial areas such as the state of Colorado. His *Flora of the Gunnison Basin* (1969) was based on nearly 20 years of botanizing in the Gunnison Basin, however it focused much more on the northern portion of the basin and relatively few vouchers were obtained.

My project in the southern Gunnison Basin consists of large expanses of sagebrush shrublands. Two endemic milkvetches, the Gunnison milkvetch (*Astragalus anisus* M.E. Jones, Fabaceae) and the Skiff milkvetch (*A. microcymbus* Barneby) can be found in the sagebrush communities of the southern Gunnison Basin. Higher up, in Cochetopa Park, the Colorado tansy-aster (*Machaeranthera coloradoensis* (Gray) Ousterhout, Asteraceae) was wonderfully abundant with all the moisture we had this year. Also notable in the Cochetopa Hills are the contorted branches of bristlecone pines, which can be seen against a backdrop of the large and lovely La Garita Mountains.

At higher elevations in the southern Gunnison Basin, moist spruce forests are filled with numerous inconspicuous orchids which are always delightful to find. Notable among these is the northern twayblade (*Listera borealis* Morong, Orchidaceae). Moonworts (*Botrychium* sp., Ophioglossaceae) were also thriving this year, and it was rare that I did not pick up at least one or two on days when I collected montane zones and above. A large portion of the southern Gunnison Basin consists of alpine tundra and my most exciting find above treeline were two new locations for the alpine poppy (*Papaver kluanense* D. Löve, Papaveraceae).

The data from this project will be provided to the Colorado Natural Heritage Program and will eventually be incorporated into the Flora of the Rocky Mountains project headed by my advisor, Dr. Ronald Hartman (see <http://www.rmh.uwyo.edu>). His energy and enthusiasm for botanical endeavors have provided

numerous students of botany with the opportunity to become intimately acquainted with the flora of the Rocky Mountains. It is precisely this kind of fieldwork that is needed to help us understand which species are threatened, and which species have just been previously overlooked.



Papaver kluanense

Artist: Jan Wingate

Private Contributions Support Research on Native Plants

On March 24, 1990, the Board of Directors of the Colorado Native Plant Society established the **John W. Marr Fund** for the awarding of small grants in support of research in plant biology. The Fund honors the late Dr. John Marr, Professor at the University of Colorado and the first President of the Colorado Native Plant Society. The Fund was established to encourage, through the provision of small grants-in-aid, research on the biology and natural history of Colorado native plants. On September 22, 2000, the Board of Directors similarly established the **Myrna P. Steinkamp Memorial Fund** to honor Dr. Myrna P. Steinkamp, who passed away earlier that year. Like the Marr Fund, this fund has been designated to support research on rare Colorado native plants, through the provision of small grants-in-aid. Myrna was a founding member of the Society, and served many years, both as Treasurer and Chair of the Membership Committee. She also served on the Conservation Committee, helping to establish the Society's role in Colorado plant conservation and public lands planning; and participated in the preparation of the CoNPS publication *Rare Plants of Colorado*. Contributions to both funds (specify John W. Marr Fund or Myrna P. Steinkamp Memorial Fund) may be made to:

Colorado Native Plant Society
P. O. Box 200
Fort Collins, CO 80522

CHAPTER NEWS

Boulder Chapter

Monthly meetings are held October through April at the Foothills Nature Center, located in Boulder at 4201 North Broadway, opposite its intersection with Sumac Ave. The Chapter now meets on the second Wednesday of each month, at 7:00 PM for business, a speaker, book sales, and socializing with refreshments. Please join us at 5:00 PM for supper with our speaker at Efrain's Mexican Restaurant, 1630 N. 63rd St, just north of Arapahoe in Boulder. For more information, contact Chapter President Caryl Shields at (303) 665-6312 or Program Chair Carolyn Crawford (303) 665-6903.

February 14, 2001 7:00 PM

Fibonacci Numbers in Nature

Longtime CoNPS member **Dick Yeatts** (Physics Professor Emeritus, Colorado School of Mines) will give a fascinating slide and computer presentation about the Fibonacci and Golden Ratio patterns in the plant kingdom. This is an excellent program, presented several years ago to the Denver Chapter, and is not to be missed. NOTE: This fascinating program will not be as technical as it sounds.

March 14, 2001 7:00 PM

Goats: All Natural Organic Weed Control Tool — The Perfect Recycle Machine

Goats have been advocated and used for weed control in recent years. **Lani Lamming** (owner, Ewe-4-ic Weed Control Service) trains her goats to eat noxious weeds, which they then devour. The goats have been used successfully by the City of Denver in their weed control efforts.

April 11, 2001 7:00 PM

Gardening with Native Plants

Jim Borland is co-host of the Gard'n Wise Guys (1430 KEZW AM) and Open Space Coordinator for Genesee Homeowners Association. Use of native plants in the urban or suburban landscape has been Jim's passion for many years. He will discuss soil preparation, propagation, maintenance, and those plants that have been used successfully in the Denver area, as well as those that are most readily available in the trade through nurseries and catalogs.

May 9, 2001 5:30 PM

Annual Picnic and Hike

Site to be announced — suggestions for a location in the Boulder area are solicited. Meet at 5:30 PM. Bring your own main dish; the Boulder Chapter will provide drinks and snacks. At about 6:15 PM, we will hike and observe wildflowers until about 8:00 PM.



Myrtus communis

Fort Collins Chapter

Indoor monthly meetings are scheduled through April at 7:00 PM in the Main Conference Room of the National Seed Storage Laboratory (NSSL) on the campus of CSU. The NSSL is located just west of the railroad tracks, about one block north of Pitkin Street (enter on the west side of the building). For more information, contact Chapter President Don Hazlett at (970) 834-1493.

February 6, 2001 7:00 PM

Western Medicine and Available Herbals

In this presentation, **Susan Mead** (Master Herbalist) will provide an introduction to herbal medicine.

March 6, 2001 7:00 PM

Ecology and Status of the Colorado Butterfly Plant at Warren Air Force Base

Walter Fertig (Wyoming Nature Conservancy) will discuss the ecology and annual census for the Colorado butterfly plant (*Gaura nexomexicana* ssp. *coloradensis*) at the Warren Air Force Base.

April 3, 2001 7:00 pm

Native Trees of Colorado

Gilbert Fechner (CSU Professor) will discuss the native trees of Colorado in a survey of the state, from east to west.

Metro-Denver Chapter

Indoor monthly meetings are held at 7:00 PM from September through April in the Morrison Center at the Denver Botanic Garden. For more information, contact President Denise Larson at (303) 733-4338 or Leo P. Bruederle at (303) 861-4119 or by e-mail at lbruederle@earthlink.net.

NOTE: Metro-Denver Chapter meetings will start at 7:00 PM beginning January 30, 2001.

January 30, 2001 7:00 PM New time!

New Species in the Myrtle Family from the Rich Flora of Queensland, Australia

Queensland is mega-rich in its biodiversity, as evidenced by its 9,000 species of vascular plants. Many new species are described annually, particularly from the more tropical areas of the state. Recent research has focused on describing new species and taxonomically revising several genera of fleshy-fruited members of the Myrtle family (Myrtaceae). **Dr. Neil Snow** (Assistant Professor, University of Northern Colorado) will provide a broad overview of the Australian flora, emphasizing Queensland.

February 27, 2001 7:00 PM New time!

Astragalus osterhoutii

Dr. Carol Dawson (Director of Research, Denver Botanic Gardens) will present the results of her dissertation research addressing the ecology and reproduction of the federally endangered milkvetch, *Astragalus osterhoutii*, which is endemic to the Kremmling area. Learn what has been done to protect this geographically restricted species, for which some populations were extirpated when the Wolford Mountain Reservoir was built north of Kremmling.

March 27, 2001 7:00 PM New time!

Rocky Flats Environmental Technology Site: Flora, ecology, and resource management

Rocky Flats is a U.S. Department of Energy facility that formerly produced nuclear weapons components during the Cold War. Now in the process of being decommissioned and torn down, what most people are unaware of it's incredible

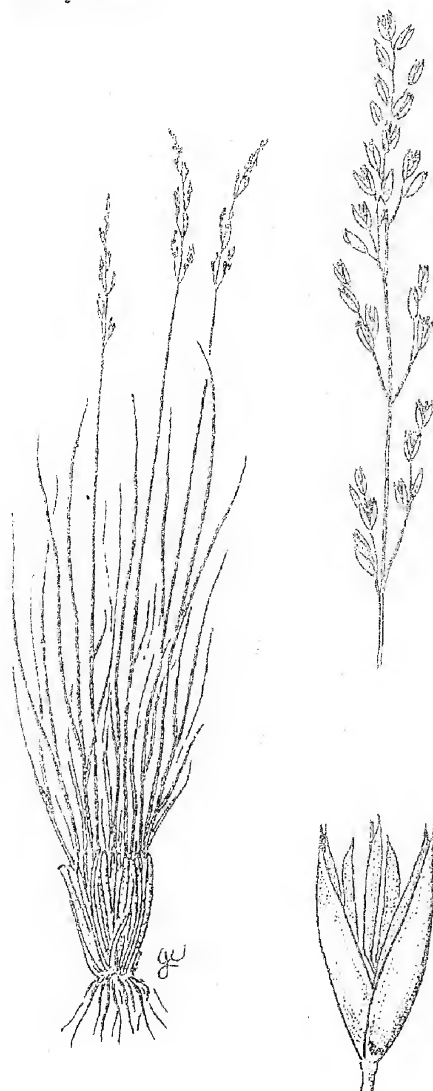
CHAPTER NEWS

biodiversity that has been protected at the Site over the past half century. **Jody Nelson**, (Botanist and Plant Ecologist for Exponent, Rocky Flats Environmental Technology Site) will discuss the flora, ecology, and challenges of resource management at Rocky Flats.

April 24, 2001 7:00 PM New time!

A Prairie Garden at Bromwell Elementary

Dr. Lois Brink (Associate Professor, University of Colorado at Denver) will discuss her ongoing collaborative efforts to coordinate the re-creation of a prairie garden at Bromwell Elementary School in Cherry Creek.



Festuca campestris
Artist: Jan Wingate

Plateau Chapter

Workshops, field trips, and other activities are scheduled throughout the year. For more information, please contact Chapter President Jeanne Wenger at (970) 256-9227 or by e-mail at Bluecrow2u@aol.com, or Program Chair Lori Brummer at (970) 641-3561 or by e-mail at lbrummer@gunnison.com.

January 21, 2001 9:00 AM

Field Trip: Grand Mesa

Cross-country skiing/snowshoeing birding and conifer identification field trip on Grand Mesa with the Grand Valley Audubon Society. Meet at the Palisade High School parking lot and bring a lunch. Contact Jeanne Wenger at (970) 256-9227 for more information.

January 27, 2001 10:00 AM

Workshop: Western Slope Botanical Families

Dr. Robin Bingham (Western State College) has geared this workshop toward the beginning botanist or the member who would like a review. The workshop will be held in Delta and last until 3:30 PM. Cost for this workshop is \$12. To register, contact Gay Austin at (970) 641-6264.

February 3, 10:00 AM

Workshop: Noxious Weed

Jude Strota will present this workshop in the Saccamanno Lecture Room of Whibben Hall on the campus of Mesa State College. To register contact Bob Clarke at (970) 242-6867.

March 17, 10:00 AM

Workshop: Grasses of the Western Slope

Dr. David Buckner will lead a basic grass identification class emphasizing grasses of the Western Slope. This will be held in Grand Junction. Cost for the workshop is \$12. To register, contact Gay Austin at (970) 641-6264.

March 24, 10:00 AM

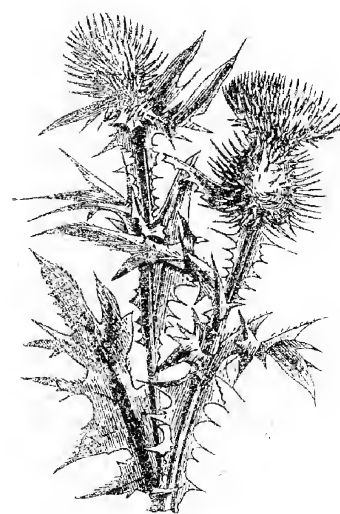
Workshop: *Cirsium*

Peggy Lyon, Michael Denslow, and Gay Austin will present this workshop. Details regarding thistle identification, particularly those differences between native and exotic thistles, will be emphasized. This work-

shop will be held in Delta. Cost for the workshop is \$12. To register, contact Gay Austin at (970) 641-6264.

HELP!

Boxes and boxes and boxes of mounted specimens are waiting to be filed in the BLM herbarium in Montrose. If you can help, please call Jim Ferguson (970) 249-5300 or Evelyn Horn at (970) 835-8391 to set up a time.



Cirsium vulgare

Southwest Chapter

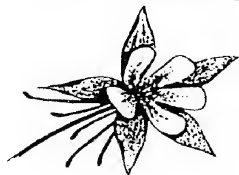
For Chapter news and activities, please contact Chapter President Sandy Friedley at (970) 884-9245 or by e-mail at friedley@frontier.net.

Job Opportunity: Plant Ecologist

Full-time plant ecologist needed to work for an environmental consulting company specializing in wetland delineations, permitting, and creation/restoration. Experience in Colorado plant taxonomy and Master's/Ph.D. required. Experience in wetland delineation, plant community description, and T&E surveys helpful, but not necessary. Strong writing skills desired. Please send cover letter, resume, and references to:

Western Ecological Resource, Inc.
711 Walnut Street
Boulder, CO 80302

Colorado Native Plant Society



The Colorado Native Plant Society is a non-profit organization dedicated to the appreciation and conservation of the Colorado native flora. Membership is open to all with an interest in our native plants, and is composed of plant enthusiasts both professional and non-professional.

Please join us in helping to encourage interest in enjoying and protecting Colorado's native plants. The Society sponsors field trips, workshops, and other activities through local chapters and statewide. Contact the Society, a chapter representative, or committee chair for more information.

Schedule of Membership Fees

Life	\$250
Supporting	\$50
Organization or Corporate	\$30
Family or Dual	\$20
Individual	\$15
Student or Senior	\$8

Membership Renewal/Information

Please direct all membership applications, renewals, and address changes to the Membership Chairperson, Colorado Native Plant Society, P.O. Box 200, Fort Collins, CO 80522. Please direct all other inquiries regarding the Society to the Secretary at the same address.

Aquilegia

Aquilegia is published four to six times per year by the Colorado Native Plant Society. This newsletter is available to members of the Society and to others with an interest in native plants. Contact the Society for subscription information. Articles for *Aquilegia* may be used by other native plant societies or non-profit groups if fully cited to author and attributed to *Aquilegia*.

Please direct all contributions to the newsletter to:

Leo P. Bruederle

Biology, Campus Box 171

University of Colorado at Denver

P.O. Box 173364

Denver, CO 80217-3364

E-Mail: lbruederle@earthlink.net

Articles not exceeding 2000 words in length and short items, such as unusual information about a plant, are especially welcome. Previously published articles submitted for reprinting require permission. Camera-ready line art or other illustrations are also solicited. Please include author's name and address, although anonymity may be requested. Articles submitted via e-mail or on disks (MAC preferably, or IBM) are appreciated. Please indicate word processing software and version; if possible, submit as an RTF (rich text format) file.

Officers

President	Jill Handwerk .. 970-491-5857
Vice-President ...	David Anderson .. 970-484-0774
Secretary	Alice Guthrie .. 303-651-3127
Treasurer	Georgia Doyle .. 970-491-6477

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Chapter Presidents

Boulder	Caryl Shields ..	303-665-6312
Fort Collins	Don Hazlett ..	970-834-1493
Metro-Denver ..	Denise Larson ..	303-733-4338
Plateau	Jeanne Wenger ..	970-256-9227
Southwest	Sandy Friedley ..	970-884-9245

Standing Committees and Chairs

Conservation ..	David Anderson*	970-484-0774
Education and ..	Jill Handwerk ..	970-491-5857
Outreach	and Alice Guthrie ..	303-651-3127
Field Studies ..	Neil Snow ..	970-330-4823
Field Trip	Gwen Kittel ..	303-258-0908
Finance	Denise Culver ..	970-225-1930
.....	and Georgia Doyle ..	970-491-6477
Horticulture and ..	Kathy Damas ..	303-543-1492
Restoration ..	and Lisa Tasker ..	970-544-3633
Membership ..	Eric Lane ..	303-239-4182
Newsletter	Leo P. Bruederle ..	303-556-3419
Sales	Rick Brune ..	303-238-5078
.....	and Velma Richards ..	303-794-5432
Rare Plant	Eleanor	
Monograph ..	Von Bargaen ..	303-756-1400
Research Grants ..	Eric Lane*	303-239-4182
Website	Bob Clarke ..	970-242-6067
Workshop: East ..	Bill Jennings ..	303-666-8348
West	Gay Austin ..	970-641-6264

* interim chair

MEMBERSHIP APPLICATION AND RENEWAL FORM

Name(s) _____

Address _____

(Address) _____

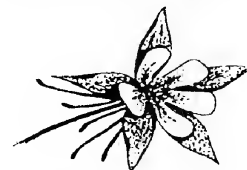
City _____ State _____ Zip _____

Phone () _____ E-mail _____

Chapter: _____ Boulder _____ Fort Collins _____ Metro Denver _____ Plateau _____ Southwest

In addition to my membership, I have included \$_____ as a contribution to the John Marr Fund (endowment in support of small grants-in-aid of research), \$_____ as a contribution to the Myrna P. Steinkamp Memorial Fund (endowment in support of small grants-in-aid of research), or \$_____ as a general contribution to the Society.

CONPS IS A NON-PROFIT ORGANIZATION -- DUES AND CONTRIBUTIONS ARE TAX-DEDUCTIBLE



MEMBERSHIP CLASS:

Dues cover one calendar year.

- ___ Individual, \$15.00
- ___ Family/dual, \$20.00
- ___ Senior/Student, \$8.00
- ___ Student, \$8.00
- ___ Corporate, \$30.00
- ___ Supporting, \$50.00
- ___ Lifetime, \$250.00

CALENDAR

CHAPTER EVENTS

Boulder Chapter

- February 14 Fibonacci Numbers in Nature
March 14 Goats: All Natural Weed Control
April 11 Gardening with Native Plants
May 9 Annual Picnic and Hike

Fort Collins Chapter

- February 6 Western Medicine and Available Herbals
March 6 Ecology and Status of the Colorado Butterfly Plant at Warren Air Force Base
April 3 Native Trees of Colorado

Metro-Denver Chapter

- January 30 New Species in the Myrtle Family from the Rich Flora of Queensland, Australia
February 27 *Astragalus osterhoutii*
March 27 Rocky Flats Environmental Technology Site
April 24 A Prairie Garden at Bromwell Elementary

Plateau Chapter

- January 21 Field Trip: Grand Mesa
January 27 Workshop: Western Slope Botanical Families
February 3 Workshop: Noxious Weeds
March 17 Workshop: Grasses of the Western Slope
March 24 Workshop: *Cirsium*

SOCIETY EVENTS

Board Meetings

- February 24 Longmont Public library, Longmont, CO
March 31 Longmont Public library, Longmont, CO
May 5-6 Grand Junction, CO

Workshops

- Feb 10, 11 *Cirsium*: The Native Thistles
First session: Saturday
Second session: Sunday
March 17, 18 Apiaceae of Colorado and Wyoming
First session: Saturday
Second session: Sunday
April 21, 22 Geology for Botanists



Colorado Native Plant Society
P.O. Box 200
Fort Collins, Colorado 80522
<http://www.conps.org>

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